

*Type locality* : Near San Francisco, California.

*Range* : California, near San Francisco (W. A. Nason); San Joaquin River (Mrs. E. E. Bush, Phil. Acad.); Merced Lake (Stearns, Dall, Smithsonian Institution); between Animas and La Plata, Colorado (Ingersoll).

*Remarks* : *L. leaii* seems to be a very distinct species, easily recognized by its short spire, very large aperture and heavy columellar plait. It is more nearly related to *L. proxima rowellii* Tryon than to any other species, but seems to be distinct. It has probably been heretofore identified as a form of the protean species *palustris*, but it is unquestionably distinct from any form of that species. It also resembles *L. reflexa hemphilliana* Baker, but differs in being very much broader and has a differently shaped and larger aperture. It is named in honor of one of America's best known conchologists, Dr. Isaac Lea.

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### THREE NEW SPECIES OF SCALA FROM CALIFORNIA.

BY WILLIAM HEALEY DALL.

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During the last year or two, among the minute shells, collected by various correspondents on the Californian coast, there have been several undescribed forms of *Scala*, descriptions of which follow.

*Scala berryi* n. sp.

Shell small, white, six-whorled : nuclear whorls polished, smooth, without varices ; later whorls with rather strong, reflected, faintly axially striated varices, on the last whorl about 20 or 21 in number ; these varices are quite close-set, not angulated in front of the suture and markedly reflected, with the interspaces smooth ; base with no basal disk or cord, the coil imperforate, the peristome rather callous on the pillar side. Long. 3.5., max. diam. 1.75 mm.

Dredged in 200 fathoms, San Pedro Bay, Cala., Mrs. Oldroyd ; and in 12 fathoms off Del Monte, Monterey Bay by S. S. Berry. U. S. Nat. Mus. 107,724.

This species is, perhaps, nearest to *S. clathratula* A. Adams, and to the next species.

*Scala rectilaminata* n. sp.

Shell very similar to *S. berryi*, with the same number of whorls and varices, but having the nuclear shell smaller, the test less heavy,

the varices nearly vertical to the surface of the whorl, instead of reflected, which makes them appear sparser, though really the same number occur on the whorl; the varices are narrower and the peristome less heavy and wide. Long. 3.25, max. diam. 1.6 mm.

Dredged in twelve fathoms mud, Monterey Bay, S. S. Berry. U. S. Nat. Mus. 110,430.

The specimens seen are of a more yellowish-creamy-white than *S. berryi* which has a bluish subtranslucent appearance.

*Scala (Cirostrema) montereyensis* n. sp.

Shell small (probably not full grown), the nucleus lost but with five subsequent rapidly increasing whorls; shell substance in two layers, the inner translucent white, solid, the outer opaque white, frothy, porous, with numerous punctulations arranged in harmony with the incremental lines, except on the basal disk where they form spiral lines; varices low, solid, with a spongy surface, nine in number; basal disk conspicuous, slightly concave; bordered by a conspicuous cord; aperture gibbous, patulous near the imperforate axis. Long. 2.5, diam. 1.5 mm.

Dredged in 25 fathoms mud, off Del Monte, in Monterey Bay, Cala., by S. S. Berry. U. S. N. Mus. 110431.

This shell represented by two specimens, of which one is in Mr. Berry's collection, is doubtless immature, but there is no other species known north of Cape St. Lucas belonging to this special group, and, though the characters require rather high magnification to see them clearly, it cannot be confounded with any other Californian species.

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#### NOTE ON THE GENUS *PSILOCOCHLIS* DALL.

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BY WILLIAM H. DALL.

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This curious *Turbinella*, collected by Mr. McCallie in the Eocene of Georgia, was described in *THE NAUTILUS* for May, 1904, p. 9. Additional material shows that the mature shell is covered with a coating of enamel which extends to the very apex of the spire, obscuring the sutures, a feature not hitherto reported in connection with the genus *Turbinella* or any of its close allies; so that *Psilocochlis* described as a subgenus, seems fully entitled to generic rank. Only the typical species, *P. mccalliei* Dall, is at present known.

## PUBLICATIONS RECEIVED.

A REVIEW OF THE AMERICAN VOLUTIDÆ. By Wm. H. Dall. (From the Smithsonian Miscellaneous Collections, vol. 48, 1907.) This paper is the revision promised by the author in his "Notes on some names in the Volutidæ," in THE NAUTILUS for April, 1906. Some years ago Dr. Dall outlined two important groups of the *Volutidæ* as follows:

1. Subfamily *Scaphellinæ*, with a membranous protoconch which is lost early in the intracapsular development and is replaced by a shelly envelope, the secondary nature of which is evident in well preserved specimens.

2. Subfamily *Volutinæ*, a shelly protoconch. In these forms there is no membranous stage, the protoconch being shelly throughout its history. This shelly apex is never naturally lost.

His recent researches have shown that the type of the genus *Scaphella* belongs to the *Volutinæ*, and therefore the subfamily name *Scaphellinæ* has been given up and *Caricellinæ* substituted for it. In his review Dr. Dall employs not only the apical shell characters which he regarded as important in his earlier papers, but also many features of the soft anatomy. Stress is laid on "the presence or absence of a cæcum to the œsophagus; the characters of the radula; of the verge, or external male organ; and the presence or absence of an operculum." A new three-fold division of the *Volutidæ*, here outlined, is regarded as provisional. It may be briefly summed up as follows:

1. Subfamily *Volutinæ*. A shelly, persistent protoconch, sessile eyes, operculum usually absent and the radula teeth usually in one tricuspid series.

2. Subfamily *Caricellinæ*. A membranous protoconch, operculum absent, radula variable or absent. Otherwise as in *Volutinæ*.

3. Subfamily *Volutomitrinæ*. Protoconch supposedly shelly; adult unicolored, with a conspicuous periostracum; small stalked eyes, "radula of a single long series, the separate teeth unicuspidate, with deeply arcuate bases." No operculum.

The genera and species are distributed among the subfamilies as follows:

*Volutinæ*: *Voluta* (Linné) Lamarck, with the following species: *musica* L., *virescens*, Sol., *ebræa* L.

*Lyria* Gray with the species *beauii* Fischer and Bernardi.